



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/277,171	03/26/1999	CAMERON BOLITHO BROWNE	169.1167	3147
5514	7590	07/28/2005	EXAMINER	
FITZPATRICK CELLA HARPER & SCINTO 30 ROCKEFELLER PLAZA NEW YORK, NY 10112			AMINI, JAVID A	
			ART UNIT	PAPER NUMBER
			2672	

DATE MAILED: 07/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/277,171

Applicant(s)

BROWNE, CAMERON BOLITHO

Examiner

Javid A. Amini

Art Unit

2672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☐ Claim(s) \_\_\_\_\_ is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/27/2005 has been entered.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 21 rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: How the cyclic opacity change is selected at random for each element. Examiner's concern: What if there are two different elements, one is a simple and the other one is a complex elements? Applicant needs to verify the following statement: The claim claims that the period is selected at random for each element.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2672

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-37 rejected under 35 U.S.C. 103(a) as being unpatentable over Aono et al.

(hereinafter refers as an Aono), and further in view of Greg Turk (hereinafter refers as a Turk) the title is Generating Textures on Arbitrary Surfaces Using Reaction-Diffusion, University of North Carolina at Chapel Hill, Computer Graphics, Volume 25, Number 4, July 1991.

1. Claims 1, 24, 29, 30, 32, 34, 36 and 38.

Claim 1, "a method of generating a colored or shaded texture for images to be displayed on a display device or printed, said method including the steps of: Aono in fig. 5 boxes 1, 11, 21 and 23 illustrates generating color and shading using radiosity processor and intensity-value filter. Also in box number 1 illustrates a geometry data i.e. the content of the geometry data includes the shape, position, and orientation of an object and attributes (such as color, gloss, reflectance and absorptivity, transparency, and use of a texture, see col. 8, lines 55-67. Aono illustrates the following step of "providing a plurality of shape elements, each shape element defining a surface; providing each of the shape elements with an opacity which varies over its surface" in fig. 19. Aono in fig. 19 illustrates triangles and squares as shape elements. Aono in fig. 19 illustrates equidistant points (e.g. vertices), "identifying a plurality of substantially equidistant points within predetermined region of the images". Aono in col. 6 line 3 teaches a gouraud shading (i.e. Gouraud shading is a method for linearly interpolating a colour or shade across a polygon. It was invented by Gouraud in 1971). Aono in col. 6, lines 41-45 teaches an

Art Unit: 2672

intensity-value at each vertex of each element is calculated from the radiosity (i.e. Radiosity is a rendering algorithm used in 3D computer graphics) calculated for each element. Next, using the intensity-value at each vertex of each element performs Gouraud shading. A result of the Gouraud shading is displayed onto a display. Aono in col. 13, lines 17-18 teaches the step of “placing a shape element at each identified point, wherein the shape elements overlap to fill the predetermined region of the images such that the region when so filled has a substantially uniform opacity,” as the projected element overlaps with some pixels on the item buffer. The following step illustrated by Aono in fig. 5 step 23 “rendering the shade elements for output to a printer or display device, such that the overlapping opacities generate a colored or shaded texture”. Aono does not explicitly specify the claim language of “the shape element at each point overlapped”. However, Turk on page 291 under subject of “reaction-diffusion on a grid” creates spots of different sizes by changing the value of the constant  $s$  in the discrete form of equations. Turk in figs. 2-10 illustrates the concept of overlapping or to correspond in function of covering/lying over an area. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to substitute applicant’s described structure, by modifying Aonos’ fig. 5, between box 11 and box 25, incorporate Turk’s method of texture synthesis i.e. called reaction-diffusion and demonstrates how these textures can be generated in a manner that directly matches the geometry of a given surface. This modification would have been beneficial to a user to compare results from different methods. Claims 24, 29, 30, 32, 36 and 38 are rejected similar to claim 1.

2. Claims 2-6 and 25-26,

See fig. 19 of Aono.

Art Unit: 2672

3. Claim 5-6,

Turk in figs. 2-3 illustrates the claim languages.

4. Claim 7-11 and 27-28,

Turk on page 295, under subject of "Mesh Cells from Voronoi Regions" teaches a finite-element mesh generation techniques, and see the calculation of the value  $V'(p)$  on the same page under subject of "rendering". The steps of claims 8-10 is obvious because, it's disclosed in the concept of finite-element mesh generation techniques. For the step of claim 11, See fig. 19 of Aono.

5. Claim 12,

See fig. 17 of Aono and in col. 16, line 10.

6. Claims 13-15,

Turk in figs. 4-10 illustrates a color associated with the shape elements.

7. Claim 16,

Turk on page 291 left col. discloses two equations that the change of the concentration at a given time depends on the sum of a function.

8. Claims 17 and 20,

Turk on page 293 under subject of "Varying Parameters Across a Surface" teaches the claim language.

9. Claim 18,

The step is obvious because the more complex shape, the more time require to render the shape.

10. Claim 19,

The step of claim language is obvious, because by varying the opacity of a shape over time, the shape rendering changes over time.

Art Unit: 2672

11. Claim 21,

Applicant needs to verify the following statement: The claim claims that the period is selected at random for each element. Examiner's concern: What if there are two different elements, one is a simple and the other one is a complex elements.

12. Claim 22,

The step is obvious see figs. 2-10 of Turk.

13. Claim 23,

See Turk in figs. 2-3 illustrates different type of patterns. But does not specify a font character outline.

14. Claims 31, 33, 35, and 37, the limitations of claims 31, 33, 35, and 37 are analyzed as discussed with respect to claims 1, 24, 29-30, 32, and 34-35 above.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Javid A. Amini whose telephone number is 571-272-7654. The examiner can normally be reached on 8-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on 571-272-7664. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2672

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Jeffery A. Bries*  
JEFFERY BRIES  
PRIMARY EXAMINER

Javid A Amini  
Examiner  
Art Unit 2672

Javid Amini